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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/804,664

03/18/2004

Jeffrey D. Earls

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09/13/2006

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EXAMINER

VO, NGUYEN THANH

ART UNIT

PAPER NUMBER

2618

DATE MAILED: 09/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/804,664

Applicant(s)

EARLS, JEFFREY D.

Examiner

Nguyen T. Vo

Art Unit

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 4-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 17-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 March 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____                                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____   | 6) <input type="checkbox"/> Other: ____                           |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election of Specie I, including **claims 1-3, 17-19** in the reply filed on August 14<sup>th</sup>, 2006 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

### ***Drawings***

2. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because the current drawings are not formal. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Lemley (6,029,054, cited by examiner).

As to claim 1, Lemley discloses an instrument receiver architecture comprising a low-band IF channel having as an input an RF signal and providing as an output a low-

band IF signal (see the low-band IF channel in figure 3A); a bank of preselection filters having as an input the RF signal and providing as an output a selected frequency band of the RF signal (see column 3 lines 57-65; column 4 lines 8-18); a high-band IF channel having as an input the selected frequency band and providing as an output a high-band IF signal (see the low-band IF channel in figure 3A); and means for selecting one of the low-band and high-band IF signals for further processing (see the switch 44 in figure 3B). See also column 3 line 21 to column 4 line 26.

As to claim 2, Lemley further discloses that the low-band IF channel comprises an up-converting stage 20' (see figure 3A) having the RF signal as an input and providing as an output a first IF signal; and a down-converting stage 24'' (see figure 3B) having the first IF signal as an input and providing as an output a second IF signal, the second IF signal being the low-band IF signal for input to the selecting means 44.

As to claim 3, Lemley further discloses that the high-band IF channel comprises a hi-band down-converting stage (see numeral 20 in figure 3A and numeral 24' in figure 3B) having as an input the selected frequency band and providing as an output the high-band IF signal for input to the selecting means 44, the high-band IF signal having the same intermediate frequency as the low-band IF signal (see figure 3B which shows the switch 44 coupled to the high-band IF signal having the same intermediate frequency as the low-band IF, which is 0.4 GHz).

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lemley in view of Higuchi (6,850,739, cited by examiner).

As to claim 17, Lemley fails to disclose a tunable local oscillator having as outputs a first oscillator frequency signal for input to the low-band IF channel to produce the low-band IF signal and a second oscillator frequency signal for input to the high-band IF channel to produce the high-band IF signal, the second local oscillator frequency signal having a frequency that is higher than the frequency of the first local oscillator frequency signal, as recited in the claim. Higuchi discloses a tunable local oscillator having as outputs a first oscillator frequency signal for input to the low-band IF channel to produce the low-band IF signal and a second oscillator frequency signal for input to the high-band IF channel to produce the high-band IF signal, the second local oscillator frequency signal having a frequency that is higher than the frequency of the first local oscillator frequency signal (see column 3 lines 15-24; column 7 line 66 to column 8 line 19). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the above teaching of Higuchi to Lemley, in order to have a simple frequency converting system (as suggested by Higuchi at column 10 lines 13-16).

As to claim 18, the combination of Lemley and Higuchi fails to disclose a YIG tunable oscillator as claimed. The examiner, however, takes Official Notice that such a YIG tunable oscillator is known in the art. Therefore, it would have been obvious to one

of ordinary skill in the art at the time of the invention to use the conventional YIG tunable oscillator in the combination of Lemley and Higuchi, in order to have a wide frequency range of frequency spectrum.

As to claim 19, the combination of Lemley and Higuchi discloses a divider 40 as claimed (see Higuchi, figure 2).

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Witte (5,233,546); Gittinger (3,931,578) disclose multiband receivers.


8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nguyen T. Vo whose telephone number is (571) 272-7901. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on (571)272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nguyen Vo

  
8-31-2006**NGUYENT.VO**  
**PRIMARY EXAMINER**